

generating a touch input, because the selected current mode is determined according to the movement direction of the touch area 12.

[0033] FIGS. 2A and 2B are display screens illustrating a method of displaying information according to an exemplary embodiment of the present invention. This exemplary embodiment corresponds to the first mode selection method.

[0034] Referring to FIG. 2A, mode indication icons (for example, a panning mode icon 21 and a zoom mode icon 22) are displayed at the left side of the touch screen 10, and entered by selection of the corresponding mode indication icon by the user. For example, if the panning mode icon 21 is selected as shown in FIG. 2A, the mobile terminal enters a panning mode. At this moment, the mode indication icon selected by the user disappears from the touch screen 10.

[0035] When the user again touches the touch screen 10, the selected mode indication icon reappears at the side of the touch screen 10, and the current mode icon 15 indicating a panning mode is displayed, as shown in FIG. 2B. Operations of detecting a touch input, extracting an uppermost coordinate of the touch area 12, and displaying a current mode icon 15 maintaining a distance from the touch area 12 are performed as previously described in relation to FIGS. 1A to 1C. In the panning mode, the user may drag the finger 11 to move the touch area 12 displayed on the touch screen 10 in a desired direction. The current mode icon 15 is continuously displayed above the touch area 12 following the movement of the touch area 12. As the location of the touch area 12 changes, the mobile terminal repeats the operations of detecting a touch input and extracting an uppermost coordinate of the touch area 12, and the location of the current mode icon 15 changes accordingly. Technology for moving an image displayed on a touch screen corresponding to movement of a touch area is well known in the art, and thereby is omitted here.

[0036] If the user selects a zoom mode icon 22, the mobile terminal enters a zoom in/out mode. Subsequently, if the user touches the touch screen 10, a zoom mode icon (not shown) is displayed above the touch area 12, and if the user drags a finger while in the zoom in/out mode, an image displayed on the touch screen 10 is enlarged or reduced. The extent of enlargement or reduction is determined by a displacement value of the touch area 12 (e.g. a distance and a direction of finger movement). The extent of enlargement or reduction may be displayed in a numeral form. With the movement of the touch area 12, the location of the current mode icon 15 changes accordingly.

[0037] FIGS. 3A to 3D are display screens illustrating a method of displaying information according to an exemplary embodiment of the present invention. This exemplary embodiment corresponds to the second mode selection method.

[0038] Referring to FIG. 3A, mode indication icons (for example, a zoom mode icon 31 and a brightness control mode icon 32) are displayed at the left side of the touch screen 10. In contrast to the mode indication icons 21 and 22 in the exemplary embodiment of FIGS. 2A and 2B, the mode indication icons 31 and 32 are not provided for a user selection, and simply indicate which mode is selected when the touch area 12 moves in a specific direction. In the example, the zoom mode icon 31 is assigned to the vertical direction and the brightness control mode icon 32 is assigned to the horizontal direction. If a touch input is generated, the current mode icon 15 is not displayed on the touch screen 10. The

current mode icon 15 appears only when the touch area 12 starts to move in any direction.

[0039] If the user touches the touch screen 10 and drags the finger 11 as shown in FIG. 3B, the current mode icon 15 indicating a brightness control mode is displayed at the right side of the touch area 12. Additionally, a displacement value 33 indicating the extent of a brightness control is displayed beside the current mode icon 15. In the brightness control mode, a display location of the current mode icon 15 may vary according to the movement direction of the touch area 12. For example, the current mode icon 15 is displayed at the right side of the touch area 12 when the touch area 12 moves rightwards, and the current mode icon 15 is displayed at the left side of the touch area 12 when the touch area 12 moves leftwards.

[0040] If the user drags the finger 11 upwards after touching the touch screen 10, as shown in FIG. 3C, the current mode icon 15 indicating a zoom in/out mode is displayed above the touch area 12, and a numerical value of the displacement value 33 indicating an extent of enlargement and reduction is displayed beside the current mode icon 15. In the zoom in/out mode, the shape of the current mode icon 15 may vary according to the movement direction of the touch area. For example, if the touch area 12 moves upwards, the shape of the current mode icon 15 may change to a symbol '+' indicating enlargement, and if the touch area 12 moves downwards, the shape of the current mode icon 15 may change to a symbol '-' indicating reduction.

[0041] As described above, the current mode is determined according to the movement direction of the touch area 12. The current mode is predetermined according to each movement direction, and the corresponding movement direction is displayed at an edge of the mode indication icons 31 and 32 located at the left side of the touch screen 10. The movement direction of the touch area 12 may be determined by identifying which of a vertical displacement and a horizontal displacement is greater. The displacement is represented as an absolute value regardless of an increasing rate or a decreasing rate of the displacement. In the case that the vertical displacement and the horizontal displacement have the same value at the beginning of movement, the current mode is not displayed when the touch area is first moved, but instead the current mode is determined and displayed at the completion of the touch movement.

[0042] The displacement value 33 displayed beside the current mode icon 15 has a function of indicating a maximum value and a minimum value. For example, while zooming in the touch screen 10 by moving the finger 11 upwards, as shown in FIG. 3C, if the displacement value 33 reaches the maximum value of zooming in, the color of the displacement value 33 changes to red to indicate that further enlargement of an image is not possible. When the maximum or minimum value is reached, the displacement value 33 does not change even if the touch area 12 moves further in the same movement direction.

[0043] In an exemplary implementation, a plurality of functions in different modes may be executed by changing the movement direction of the finger 11 continuously, as shown in FIG. 3D. In the implementation, the finger 11 starts from a first touch area 12a and moves leftward to a second touch area 12b, then moves to a third touch area 12c, and finally moves leftward to a fourth touch area 12d.

[0044] As the finger 11 moves leftwards from the first touch area 12a to the second touch area 12b, brightness control